

25X1

[redacted]
Post Office Box 1407
Main Post Office
Washington 13, D. C.

Declass Review by NGA.

Re: [redacted]

Assignment #III, Technical Directive #I
Our Ref. No. L-XG-29

Dear Al:

Attached is a sample of the material that, with your approval, will be sent to four consultants for their opinions on the Photochemical Solutions Laboratory. This request for consulting services will be made in accordance with instructions received from John C. on 24 July 1961.

None of the enclosed material has been sent to any of these people. The general subject, however, has been discussed with them. They are aware that the material is forthcoming and are prepared to submit their comments to us. You will note that our plan is to send them this material by 21 August and to receive a reply by 4 September.

Your review of this material in order to meet the proposed issue date of 21 August will be appreciated.

Very truly yours,

TAM/sr

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[redacted]
Enc. (1) Memo from [redacted] to John C.
(2) "Evaluation of Photochemical Solutions Laboratory"
(3) [redacted]

14 August 1961

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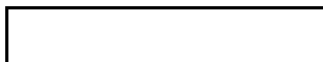
Enclosed are the two proposals and requirements for the chemical mixing systems we are considering for our client's photographic facility. We would consider your evaluation, opinions, and recommendations concerning these proposals as a great value toward the final establishment of such facilities.

Through the study of these two systems and their particular attributes, please evaluate not only those aspects pertaining to the stated requirements, but any detailed aspects which may not be covered by the general requirements. A final general recommendation of one of the systems is necessary.

Please advise us immediately of the approximate time involved for the evaluation and a close estimate of your desired fee. A contractual letter will follow assuming your requirements are in order.

We would appreciate your final written replies to be returned to us by the 4th of September 1961. Please feel perfectly free to give me a call at any time for any questions or points which need clarification.

Sincerely,



CAL/sr

14 August 1961

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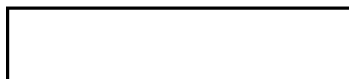
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CAL/sr

14 August 1961

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We would appreciate your final written replies to be returned to us by the 4th of September 1961. Please feel perfectly free to give me a call at any time for any questions or points which need clarification.

Sincerely,



CAL/er

11 August 1961

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Enclosed are the two proposals and requirements for the chemical mixing systems we are considering for our clients photographic facility. We would consider your evaluation, opinions, and recommendations concerning these proposals as the greatest value toward the final establishment of such facilities.

After my discussions with you, [redacted] I feel that any and all suggestions made by you and your colleagues will be made only after a careful consideration of all facts involved.

Through the study of these two systems and their particular attributes, please evaluate not only those aspects pertaining to the stated requirements but any detailed aspects which may not be covered by the general requirements. A final general recommendation of one of the systems would be appreciated.

If there are not too many political complications involved, we would appreciate your forwarding one copy to your colleagues [redacted]. There are two people in particular whom our client has asked to give

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[REDACTED]

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11 August 1961

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their considerations. These people are [REDACTED]
[REDACTED] Your judgment would certainly be better
than our's in picking the other various qualified people.

We would appreciate your written replies to be returned to us by the
4th of September 1961, if possible. Please feel perfectly free to
give me a call at any time for any questions or points which need
clarification.

Very truly yours,

[REDACTED]

CAI./sr

[redacted] is now a private consultant. He was previously Director of Research [redacted] and later the Technical Director of Consumer Operations [redacted] establishing photographic laboratories throughout the country for all types of processing. Other experience along this line included several years with [redacted] [redacted] and with the Navy at Anacostia as Head of the Development Section. His primary interest is in physical chemistry, which is the field of his doctorate.

John C.

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11 August 1961

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4. [redacted] is also a private consultant. He was previously Chief Engineer of the very clean processing laboratories at Metro Goldwyn Mayer Studios. Previous experiences were in the engineering phases of photographic systems with [redacted]. Unrelated experiences were engineering ventures primarily related to thermodynamics.

Enclosed are copies of the instruction letters, the general requirements, and the two proposals. These will be mailed exactly as stated with your approval. If you have any changes, please let us know as soon as you can since these people will still be restricted to the 4 September date. We have allowed enough time for their complete evaluation as well as the time for your suggestions or approval. We would like to mail these out to the people by 21 August 1961.

/sr

EVALUATION OF
PHOTOCHEMICAL SOLUTIONS LABORATORY

11 August 1961

Introduction

The Photochemical Solutions (chemical mix) Laboratory is a functional supporting unit without any productional aspects. It has the sole purpose of supplying, as compared to replenishing, the processing areas of the photographic laboratory with solutions capable of giving results compatible with the standards of the photographic system. The design of the solutions lab is entirely dependent upon these standards as well as the particular demands of the processing areas. Immediate and variable supply demand, high quality control, and cleanliness are very important considerations involved here.

Statement of the Problem

There are many ways to mix photographic chemicals into working solutions, many ways to transport these solutions to the processing areas, and as many more ways to maintain a constant, consistent, and precise quality control of the solutions. It is the purpose of this evaluation to look at two proposed systems for accomplishing the stated tasks. It should be of little consequence whether one proposal pitted against the other would result in a recommendation or decision, but the user is the one who must face the end result and will either enjoy or resist the system. Therefore, the resulting comparison of the two proposed systems shall be made entirely from the user's viewpoint. The "user", as implied here, refers to all persons physically engaged in

performing functions concerned directly with the Photochemical Solutions Laboratory. This may include the photo lab supervisor, processing personnel, chemical mix personnel, maintenance, administration, and all persons engaged in making or using high quality photographic materials.

This Photochemical Solutions Laboratory has requirements to which any proposal must meet, and are entirely regulated by the demands of the photo processing stations. These demands are: exact quality control through the end use of all solutions; immediate and infinitely variable supply demand; elimination of any and all possible contamination areas; versatility in preparing, storing, and supplying many forms of photographic solutions in continuous or intermittent demands; reliability of all functional components; economy of operation; and ease of operation. Each of these items can be expanded considerably and are meant to be all inclusive.

The various solutions must serve approximately 17 different and isolated processing stations with five to seven (5) to (7) developers, one (1) short stop, and two (2) fixers. Since there are few temperature controlled machines or sinks, it is advisable to maintain a close temperature control on incoming solutions. Sinks and tanks are hand operated, generally processing sheet film or paper, with some short rolls. The machines are of varied type and are almost all semi-automatic. The processing will include almost all types of black and white film and paper products, with no color processing.

PROPOSAL NUMBER ONE

Chemical Storage System

"There are five basic ingredients to all photographic developers: (1) a reducing agent; (2) an accelerator; (3) a restrainer; (4) a preservative; and (5) an alkali. The amounts and balances of these basic ingredients are varied to suit a specific requirement based on a photographic emulsion. All of these basic ingredients are readily soluble to a 50 percent state of saturation. These ingredients, when stored separately, have excellent keeping qualities and a low rate of oxidation. These ingredients, when purchased as bulk chemicals, cost but a fraction of the price of compounded developer solutions. Since the bulk ingredient of all of these formulae is water, a 50 gallon batch of 50 percent saturated Metol will make more than 77,000 gallons of a developer solution. From this fact it is almost needless to point out that the frequency of mixing these basic ingredients would be extremely low. Photographic paper and film require different fixing agents and, therefore, it is proposed that two types of fixing baths be stored in 300 gallon containers. It is also proposed that 50 gallon batches of the five basic ingredients be stored in a 50 percent saturated solution. These five basic ingredients would be piped to a central 100 gallon mixing vat and, since the chemicals are in solution, the compounding of a developer formula would be extremely rapid and effortless. The task would be reduced to consulting

a card file for the proper number of ounces of each saturated solution to be combined with the necessary number of gallons of water to make the required number of gallons of developer solutions. It is unnecessary to point out that these chemicals would all be at working temperatures and no delay would be encountered between mixing and using of these solutions. It is important to mention that a large variety of formulae could be supplied to the various processing stations with only a few moments delay. These solutions would be used during their normal life and discarded, with the possible exception of the fixing bath for film. This solution could be returned to a silver recovery and then put back into storage. Attached is a list of five well known developer formulae, using the aforementioned basic ingredients, and will serve to illustrate their universal application. Due to the rapid access of these developer formulae, only the required number of gallons of each solution would be prepared for distribution to the processing stations each day. Only a short notice of any program changes would be required to evacuate and refill any of the processing stations. Since all of these solutions would be compounded from known basic elements, there would be no variety in results, and an extremely high degree of quality control would be achieved."

PROPOSAL NUMBER TWO

Photochemical Solutions Laboratory

"The Photochemical Solutions Laboratory shall supply solutions of the highest quality to the photo processing areas. It shall have the versatility of combating any foreseen or unforeseen circumstance when the demand requires. In order to accomplish this result, the system shall employ sufficient supply tanks to meet the varied demand. There are presently being used; seven developers, one short stop, and two fixers, totaling ten solutions. To allow for changing and possibly new types of solutions, this should be expanded to twelve supply sources or tanks. The supply tanks shall be of such a size as to hold enough solution for a normal one week demand but shall be capable of handling solutions on a daily basis as well as for storage up to six months or more if necessary. The tanks will have capacities of 330 gallons for eight tanks and 100 gallons for the other four. These conditions just stated dictate a form of tank where all atmosphere is excluded, using an inert gas as nitrogen, to permit long term storage, and where a change of solution or new mix may be handled quite easily. This means that the actual mixing of the bulk chemicals must be done in another tank and the solution pumped into the supply tanks. Since contamination of any form cannot be tolerated, each supply tank will have its own individual mix tank. The solution shall be filtered before entering the supply tank. As the solution leaves the supply tank, it shall be filtered again to eliminate sediment, etc. Since quality control is of utmost importance, it is impossible to retain the quality if the piped solutions are delivered to a particular

solutions inherently change in time even under the most stringent care in mixing. Therefore, the unused solutions should not be allowed to stand in the pipe but should be returned to the solutions lab for periodic checking. This means a closed "loop" piping system where the solutions are continuously being circulated to as many areas as necessary and returned. With this form of piping, it is very easy to add a small hot-cold water heat exchanger for maintaining temperature control at the outlets.

Also, this form lends itself ideally to processing stations where intermittent processing is done in trays, tanks, sinks, or automated machines. Each solution is at the processing personnel's fingertips exactly as and when needed, with no delay, no mixing except dilution, or possible loss of quality of any form. All solutions would be carried in the "stock" solution form and would be diluted as desired at the processing stations. All used solutions would be dumped after use. The only deviation from this would possibly be with the processing machines. Since it is anticipated that the processing machines will be used more frequently in the future, there are also three replenisher tanks of 100 gallon capacity adjoined with three supply tanks and may be used as needed. The replenisher tanks may also be used as additional supply tanks if desired.

Quality control will only be necessary during chemical mixing and periodic checking of the stock solutions. A small separate area is established for this function in the solutions lab. Filters, pumps, and controls will be placed where necessary to assist the solutions lab operator in maintaining ideal operations with the least amount of time involved.

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Technical Directive No. 1/Assign III
Contract No.
Task Order No. 01/0/18132
Date 8 June 1961

REGISTERED - RETURN RECEIPT REQUESTED

Gentlemen:

This Technical Directive constitutes authorization and direction for you to perform the services and furnish the supplies in the manner prescribed in the attached schedule of 2 pages, numbered and dated the same as this letter. The attached schedule is intended to be complete with respect to work description and technical instructions relative thereto, place and period of performance, completion date, f.o.b. delivery point, inspection requirements and any other directions reasonably necessary for your prompt performance of the work authorized.

Unless you indicate to the contrary within ten (10) days from receipt hereof, you will be considered as having agreed to the feasibility and completeness of this Technical Directive and to have in all respects accepted same for prompt performance.

It is specifically understood, however, that this letter shall not make any increases(s) in either the scope of work or amount of funds obligated or otherwise to modify the terms and conditions of the above contract or task order, any such modifications being expressly reserved for bilaterally executed contractual amendments.

All correspondence relative to this Technical Directive shall be forwarded to the Contracting Officer at the address below, inner envelope being marked to the attention of the undersigned individual.

Very truly yours,

Contracting Officer
Address:

Acknowledged and Accepted

2430 E Street, N.W.
Washington 25, D. C.

BY _____

TITLE _____

Return the original and two signed copies
to the Contracting Officer

S-E-C-R-E-T
(When Filled In)

NOTICE

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Sec. 793 and 794, the transmission or revelation of its contents in any manner to an unauthorized person is prohibited by law.

Page 1 of 2 Pages

(Plain paper may be used for continuation, if required.)

SCHEDULE

Contract No.:	
Task Order No.:	01/0/18132
Technical Directive No.:	1/Assign III
Date:	8 June 1961

WORK DESCRIPTION AND TECHNICAL INSTRUCTIONS

I. This Technical Directive applies to Assignment III of the subject Contract, Task Order No. 01/0/18132.

II. Definition: The Photo-chemical Facility is that part of the I.O.'s total Photo Lab which provides for the mixing, storage, transport and analysis of those chemical solutions required in the Photo Lab.

III. Through the use of the necessary professional services, provide required investigation of the various aspects for establishing detail requirements of a Photo-chemical Facility commensurate with the current and anticipated 60 months needs of the I.O. From these investigations, specifications shall be written and diagrammatic drawings and layouts prepared, covering the requirements for construction and/or manufacturing and installation of a Photo-chemical Facility for submission to Vendors for quotations. Such specifications and drawings shall include specialized storage requirements for liquids and other required chemicals, necessary piping, valving, controls and safety devices, color coding (piping), venting systems, hoods etc.

IV. These investigations will consider and provide information essential to the efficient and economical layout of the Photo Lab in accordance with Assignment II of the Contract. To this end, on-line layouts will be developed for relocating existing equipment, tanks and other process items which can practically and economically be re-used in [] with proper consideration and provision for integrating new equipment to be acquired for the Photo Lab. In addition, provision will be made for the means by which the Photo-chemical Facility may be expanded including but not limited to: pipe sizing, pipe routing, controls to permit larger and adequate extensions of these systems into planned and/or reserved floor areas, as well as connections and tie-ins for expansion of power supplies, A/C and humidity, dust and atmosphere requirements. Provision for expansion will anticipate minimizing interruption to any Photo Place, Performance Period and Completion Date:

Consignee, Ship to, F.O.B. Point:

Inspection Requirements:

Packing and Packaging:

Additional Instructions:

S-E-C-R-E-T
(When Filled In)

SECRET

Approved For Release 2005/06/06 : CIA-RDP78B04770A002500

Page 2 (continued)

Lab function during such expansion moves, and where practical, complete avoidance of interruption will be planned for the facilities system, piping, controls etc.

V. Cleanliness, contamination isolation, controlled access of personnel, materials, solutions and interrelated control in the entire Photo Lab are to be considered and planned for. Wherever possible, automatic controls shall be applied to the Photo-chemical Facility.

VI. When this Assignment is fully accomplished portions of the data, materials, diagrams and drawings developed may be determined to be appropriate for inclusion in the work of the A/E Contract.

VII. At this time, the Contractor is not authorized to procure equipment, specialized items or materials for a Photo-chemical Facility but is encouraged to obtain proposals for same if needed. After a determination of the requirements for such a facility & materiel is made, the Contractor may be further directed by a separate technical directive to procure any long-lead time items by means of the Contractor's own market search and purchasing capability.

SECRET